

What is claimed is:

1. A titanium copper alloy having excellent strength and bendability characterized in that;

5 it comprises 1.0 to 4.5% by mass of Ti, the balance of copper and inevitable impurities,;

diameters of intermetallic compound particles consisting of Cu and Ti precipitated in the alloy are 3 μm or less;

10 the average number of said intermetallic compound particles having the diameters of 0.2 to 3 μm is 700 or less per a cross-sectional area of 1000 μm^2 in a transverse direction to a rolling direction;

the average grain size measured in a cross-sectional area in a transverse direction to a rolling direction is 10 μm or less; and

a tensile strength is 890 MPa or more.

15 2. The titanium copper alloy according to claim 1, wherein the average number of the intermetallic compound particles having the diameters of 0.2 to 3 μm is 6 to 700 per a cross-sectional area of 1000 μm^2 in a transverse direction to a rolling direction.

20 3. A manufacturing method of the titanium copper alloy according to claim 1 or 2 comprising a hot rolling, a cold rolling, a solution treatment, a cold rolling and an aging treatment, of a titanium copper alloy ingot in this order characterized in that;

the ingot is heated at a temperature of 850 to 950 $^{\circ}\text{C}$ for 30 minutes or more before the hot rolling and then the ingot is hot rolled and the temperature in the end of the hot rolling is 700 $^{\circ}\text{C}$ or more;

25 in the solution treatment, the material is annealed at a temperature in a

range between (T-50) °C and (T+10) °C, wherein T is a temperature at which the solubility of Ti in Cu is equal to the concentration of Ti contained in the alloy; and thereafter

the annealed material is cooled at a cooling rate of 100 °C/sec or more.

5 4. A manufacturing method of the titanium copper alloy according to claim 3, wherein a reduction ratio in the cold rolling between the solution treatment and the aging treatment is 50% or less.

5. A manufacturing method of the titanium copper alloy according to claim 3 or 4, wherein the aging treatment is conducted at a
10 temperature of 300 to 600°C.